DOCUMENT RESUME

ED 166 881 EC 113 428

AUTHOR Rittenhouse, Robert K.; Myers, James J.
TITLE The Acquisition, Construction and Use of American Sign Language: A Seminar for Teachers and Paraprofessionals Working with Non-Signing Severely-Handicapped Children.
INSTITUTION Hope School for Blind, Multiply-Handicapped Children, Springfield, Ill.; Illinois State Univ., Normal.
PUB DATE Sep 78
NOTE 18p.; Seminar sponsored by the West Central Illinois Regional Program for Handicapped Children

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Cognitive Processes; *Language Development; Manual Communication; Seminars; *Severely Handicapped; *Sign Language

ABSTRACT

The document reports on a seminar sponsored by the West Central Region for Low-Incident Handicapped Children, on the acquisition, construction, and use of American Sign Language with severely handicapped children. Topics addressed include the cognitive preconditions to language, sign formational rules, the structure of sign, and American Sign Language and its derivatives. (DIS)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED166881

THE ACQUISITION, CONSTRUCTION AND USE OF AMERICAN SIGN LANGUAGE: A SEMINAR FOR TEACHERS AND PARA-PROFESSIONALS WORKING WITH NON-SIGNING SEVERELY-HANDICAPPED CHILDREN

HOPE SCHOOL FOR BLIND, MULTI-HANDICAPPED CHILDREN
#50 HAZEL LANE
SPRINGFIELD, ILLINOIS

SEPTEMBER 7 & 8, 1978

By

ROBERT K. RITTENHOUSE, PH.D.

JAMES J. MYERS, M.A.

THIS SEMINAR WAS SPONSORED BY THE WEST CENTRAL REGION FOR LOW-INCIDENT HANDICAPPED CHILDREN, MR. STAN NELSON DIRECTOR; COORDINATED BY MR. JAMES MYERS, DIRECTOR, HOPE SCHOOL; AND TAUGHT BY DR. ROBERT RITTENHOUSE, ASSISTANT PROFESSOR, ILLINOIS STATE UNIVERSITY, NORMAL, ILLINOIS

EC113426

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Robert K. Rittenhouse

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

THE ACQUISITION, CONSTRUCTION AND USE OF AMERICAN SIGN LANGUAGE: A SEMINAR FOR TEACHERS AND PARA-PROFESSIONALS WORKING WITH NON-SIGNING SEVERELY-HANDICAPPED CHILDREN

HOPE SCHOOL FOR BLIND,
MULTIPLY-HANDICAPPED CHILDREN
SPRINGFIELD, ILLINOIS 62701
September 7 & 8, 1978

Seminar Leader: Robert K. Rittenhouse, Ph.D.
Assistant Professor
Illinois State University
Department of Specialized
Educational Development
Normal, Illinois 61761

Agenda

Thursday, September 7

9:00 a.m.	Introduction and Goals of the Seminar
9:30 - 10:00	Pre-test. Sign Formational Rules
10:00- 10:30	Fingerspelling, Counting & Basic Sign Construction
10:30- 10:45	BREAK
10:45- 12:00	Content and Function Signs
12:00- 1:00 p.m.	Silent Lunch
1:00 - 2:00	Review of Morning Signs
2:00 - 3:30	Discussion of Sign Acquisition and the Cognitive Pre-conditions to Language Acquisition
3:30 - 4:00	Signs of Interest to Participants

Friday, September 8

9:00 - 9:30 a.m.	Review of yesterday's material
9:30 - 10:30	New Signs of Interest. Sign adaption
10:30- 10:45	BREAK
10:45- 12:00	Participant Signing. Connected language
12:00- 1:00 p.m.	Silent Lunch
1:00 - 2:00	Sign Review. Receptive & Expressive practice
2:00 - 2:30	Other Signs of interest to participants
2:30 - 3:00	Post-test
3:00 - 4:00	Videotaping of Participant's Sign Skills and Evaluation of Seminar

Introduction

The purpose of this seminar was a dual one: 1) to provide teachers working with severely handicapped children skills in the language of signs and 2) to provide them with an understanding of the cognitive pre-conditions to the acquisition of language. While a substantial number of the students at Hope School had some skill in the use of sign language, many students did not demonstrate any language skills.

By presenting teachers with a uniform system of signs, it was felt that communication among student signers would be facilitated. However, of greater interest was the development of basic sign skills in those students who appeared to have no capacity to acquire oral language.

The Cognitive Pre-Conditions to Language

It is currently held that the sensorimotor period of child development not only precedes the acquisition of language but provides its foundation (Flavell, 1977). The ultimate achievement of this period of development, the acquisiton of object permanence, is seen as a necessary pre-condition to language acquisition. Essentially, one must be cognitively capable of representing his world before he can begin talking about it (Uzgirus & Hunt, 1975). Hunt (1969) has isolated the various developmental branches of the sensorimotor period and has illustrated them through a series of videotapes. The tape on object permanence was viewed by the participants in the seminar.

Two scholars who have made major contributions to the understanding of early language acquisition are Jean Piaget (1952, 1954, 1962) and Roger Brown (1973). Piaget's view of sensorimotor intelligence is based on his observations of young children's actions, primarily those on his own three children from birth to 18 months of age.

The Piagetian sensorimotor child is described in three of Piaget's books (1952, 1954, 1962) all of which were published over 30 years ago. Brown's data base consists of the spontaneous utterances of 32 children, ages 19 months to 2½ years, across 12 different languages. The combined research of these two individuals yields two independent descriptions of young children, one of pre-language cognitive development and the other of language acquisition. While these two descriptions were done at different times for different purposes, Brown suggests that they do converge and strongly suggest a cognitive basis to language acquisition.

The ultimate cognitive achievement of the young child during this sensorimotor period is the acquisition of object permanence which Brown considers a necessary pre-condition to language acquisition. The Piagetian object concept is built upon the notion that infant and the objects upon which he acts are one or undifferentiated and not on the concept of objects per se. Initially, the infant does not search for objects with which he was once in perceptual contact, but which have now disappeared. It is argued that this behavior indicates that objects which are outside the perceptual field of the infant cease to exist. By the end of the sensorimotor period, the child views objects both visible and invisible, as permanent. The child will now persist in searching for vanishing objects. It is argued that this child also realizes that he, other people and objects are independent and occupy private spaces. According to Piaget (1951, 1963), language begins to be acquired near the end of the sensorimotor period. His explanation of the transition from "perceptual-motor" to verbal behavior is based on his theory of the development of mental images. Piaget states that:

> During stages one to five of sensori-motor imitation there are no mental images. In stage six of this period, imaged representation makes its appearance. (1951, p.74).

This means that during Stage Six, when the acquisition of object permanence is near completion, the child achieves the ability to represent to himself objects and events which he is not directly perceiving. He has developed the necessary cognitive structures for symbolically representing his world and is thus capable of acquiring language which will be used to talk about that world.

Collectively the implication of these theoretical positions for the training of severely handicapped apparently non-language children is that a language-training program would initially concentrate on the cognitive pre-conditions to language, most assuredly object permanence. In other words, before one can expect meaningful language from such children complete object permanence must be present.

Sign Formational Rules

The Structure of Sign

Sign and English do differ not only on the modality in which they are expressed, but in their structure as well. The syntactical difference between Sign and English can be illustrated as follows:

1. The cow jumped over the moon. (English)
2. Moon cow jumped over. (ASL)

In sentence #2, Moon would be represented spatially with one hand. The moon sign would remain fixed while jumped and over would be expressed as one sign with the other hand (the one used to form cow) which would move over the top of the moon-hand.

A more contemporary approach to studying the linguistics of Sign has been not to compare it to English, but rather focus on and describe its unique character. These unique characteristics, again, are, in part, a function of the kinesthetic-visual nature of Sign and are equivalent

to the meaning which inflections and word order give to English. In conversational ASL, signers will construct an imaginary stage on which they place characters and items (Friedman, 1975). The signer will then refer back to people or events which had earlier been identified and placed on the stage or "sign space." This referential act is often performed simply by pointing to the place on the "stage" where the imaginary item was originally "placed." For example, if the subjects of a conversation were Tom, Dick, and Harry, each would be introduced and assigned a location on the "stage." Subsequent referral to them would be performed by pointing to them. This sign space is also efficient when the signer needs to indicate relationships among characters or items. For example, if Tom hit Dick and Harry came to his aid, the signer can move the sign hit from Tom's location to Dick's location and simultaneously move Harry to a location where he can offer Dick help. Ellenberger (1976) has found that this efficient spatial-semantic representation is not a part of the deaf child's early Sign system nor is it comprehended by the young deaf child until a later stage.

ASL and Its Derivatives

As mentioned earlier, Stokoe has identified dictinct formational features or parameters of American Sign Language:

1. the configuration of the hand or hands in making the sign;
2. the place of articulation of the sign, which may be in contact with various parts of the body;
3. the movement involved in making the sign; and the orientation of the hands; and
4. orientation of the palm to the body.

A sign is misproduced if one of these parameters is altered and, in fact, alteration could result in the production of a different sign, (as in the case of the signs for noon, tree, forest and flag). "Noon" is formed by bending the arm at the elbow so that the hand and forearm point up and the upper arm extends out from in front of the body at a 90° angle from the shoulder. By spreading the fingers and shaking the hand from that position, "tree" is produced. By shaking the hand and slightly sliding the arm position to the right, "forest" is made. Finally, "flag" can be produced from that position by simply waving the hand in a right-to-left direction.

The Derivaties of Sign

Manual communication systems have been developed for the purpose of bringing spoken English and Sign into closer syntactic proximity. One of the earliest English-based sign systems was Systematic Sign Language (Paget & Gorman, 1968) now commonly referred to as Paget-Gorman Systematic Sign Language (PGSSL). This system attempts to put English and Sign into one-to-one correspondence grammatically as well as syntactically.

The four criteria basic to the PSGGL system are:

1. each sign should represent an English word or part of an English word;
2. signs and spoken English words should correspond with respect to order;
3. signs should be inflected to reflect the word endings in spoken English words; and
4. signs should be adapted to form a small, basic vocabulary for initial use. (Wilbur, 1976)

This system's output and its cumbersome nature can be illustrated with the sentence The cow jumped over the moon. The PGSSL-user would sign:

The - cow - jump - ed - over - the - moon.

Jumped would be divided morpemically and over, which reduplicates jump, would also be signed. While English syntax would be preserved in the PGSSL system, the extra load this rather short sentence puts on visual memory and the inefficiency of the jump-over reduplication offset its syntactical value. To express personal nouns, the PGSSL system uses a basic sign plus a modifier sign in combination. For example, teacher should be signed: teach person. Professor would be signed: college teach person. For each meaning, there are separate signs or sign combinations.

Another derivative of ASL which attempts to preserve English syntax is Signing Exact English (SEE). The three basic properties of SEE Signs are:

1. pronunciation;
2. spelling; and
3. meaning.

If two of these three properties are identical for two English words, then the same sign is used for both of them. Therefore, a word like track which has multiple meanings, including: to follow, a footprint, a runway, etc., would have one sign because it is spelled and pronounced the same irrespective of its referent. Wind, on the other hand, meaning either to turn (as a watch) or a breeze, would have two distinct signs because the words have different meanings and are pronounced differently. Past-tense verbs are made by signing the verb plus the sign for before. Ran, for example, would be SEE Signed: run before. The past participle is produced by signing the verb plus the ASL sign for finish.

Manual English (ME) is another ASL-derivative designed to preserve the syntax of English. It, however, uses ASL signs whenever possible and also more fingerspelling than the previously discussed derivatives. ME uses different signs to semantically distinguish homonymns. Call, which could mean to name, to summon, to phone, or to shout, would have four distinct signs and these signs would correspond to available ASL signs. Past-tense verbs are formed by signing the ver plus before. ME is unique in its method of distingu' hing synonymns. Synonyms are initialized and then produced using the same sign formation as the basic referent. For example, office would be made by forming the letter o and then producing the same motion as for the sign room.

Signed English is less systematic than the other derivatives and also less determined to preserve English syntax. Essentially, Signed English strings together ASL signs and fingerspelled words to produce an English syntax. However, it is also common to find Signed English taking on telegraphic features in its more informal use. Sentences 1 and 2 illustrate Signed English in its formal and informal forms. In Sentence 1, the underlined words would be fingerspelled:

1. The cow jumpedover the moon.
2. Cow jumpover moon.

This variability is analogous to situational spoken language and the greater use of fingerspelling facilitates uninterrupted communication.

For a complete review of research related to Sign acquisition and use, participants are advised to read Rittenhouse (1978).

SEMINAR
SIGNS COVERED

A.
a few
a little bit
ability
about
above
accept
accompany
across
act
action
add up
address
admit
advise
afraid
after
after a while
afternoon
again
age
agree
aid
airplane
all
all night
allow
almost
alone
also
always
America
among
and
anger
animal
answer
any
appear
area
argue
around
arrive
ashamed
ask
attention

B.
bad
bath
be careful
beautiful
become
before
begin
believe
belong
below
beneath
beside
best
better
between
big
birth
black
boat
body
book
born
both
bother
boy
bread
break
bring
brother
burn
butter

C.
call
can
can't
candy
car
cat
catch
chair
chase
child
children
church
clean
clean up
clothing
coat
coffee
cold
come
complain
continue
cook
cousin
cry
cup

D.
daily
dark
daughter
day
dead
deaf
decide
delicious
desk
do
doctor
dollar
don't
don't know
don't like
don't want
door
down
draw
dress
drink
drop

E.
each other
earn
eat
egg
empty
enjoy
enough
error
every
exercise

F.
face
fall
fast
fat
father
fault
fear
feel
female
few
fill
final
find
finish
fire
first
fish
flower
fly
follow
food
forbid
forget
Friday
friend
frighten
from
full
funny

G.
get
girl
give
glass
glasses
go
good
grandfather
grandmother
grow

H.
handkerchief
hands
happy
hard
headache
hear
heavy
help
hide
home
hope
hospital
hot
house
how many
how much
hungry

I.
I
improve
in
inside
instead of
intelligent
interesting

J.
join
judge
jump

K.
key
know

L.
large
last
late
later
law
lazy
learn
leave
letter
life
light
like
listen
lock
long
love

M.
machine
mail
man
meat
medicine
milk
mistake
Monday
money
more
morning
mother

N.
name
new
next
nice
night
no
noisy
not
nothing
nurse

O.
obey
off
old
on
open
orange

P. pain
paint
pants
paper
pardon
parents
pass
pay
person
picture
potato

R. rain
ready
restaurant
right

S. sad
Saturday
school
scream
seat
secretary
see
shoes
shower
sick
sing
sister
sit
smell
snow
stand
Sunday
supper

T. talk
tall
taste
tea
tears
telephone
Thursday
town
train
tree
Tuesday

U. under

W. water
Wednesday
wet
what
when
where
who
wrong

Y. yours

EVALUATION

HOPE SCHOOL - ILLINOIS STATE UNIVERSITY

Seminar on the Acquisition and Use
of American Sign Language

September 7 & 8, 1978

		YES	NO
1.	The seminar met my expectation	13	1
2.	It gave information and ideas which I can use	14	
3.	General sessions were good	14	
4.	Discussion groups were effective	14	
5.	The subject content was relevant	14	
6.	The seminar leader was sensitive to my needs and his leadership was conducive to learning	14	
7.	The physical facilities were adequate	13	1
8.	This learning experience has been worth the investment	14	
9.	This seminar encourages me to develop a plan in my own program	14	
10.	This seminar has helped shape my own attitude toward American Sign Language	13	1

SEMINAR IN GENERAL

Extremely Worthwhile (1.4) 2 3 4 5 6 7 8 9 10 Worthless

RELEVANCE OF SEMINAR MATERIAL AND EXPERIENCES

Very Informative (1.6) 2 3 4 5 6 7 8 9 10 Provided no Information

SEMINAR CONTENT

Content Clear (1.1) 2 3 4 5 6 7 8 9 10 Content

LENGTH OF SEMINAR

Too Long 1 2 3 4 (5.4) 6 7 8 9 10 Too Short

RECOMMENDATIONS TO OTHER TEACHERS AND AGENCIES

Would Recommend To Others (1.1) 2 3 4 5 6 7 8 9 10 Would not Recommend To Worst Enemy

3. WAS THE SEMINAR LEADER SUFFICIENTLY AVAILABLE FOR DISCUSSION OF YOUR INDIVIDUAL QUESTIONS AND CONCERNS?

-Yes, constructively critical also.
-I would have liked more time to discuss concerns. The problem was time, not availability.

4. WHAT DID YOU FIND MOST BENEFICIAL IN THIS SEMINAR?

-Attitude change in fellow teachers towards sign - hopefully will do much to unify the deaf-blind unit and the rest of school.
-I learned a great deal of new signs. It also gave me insight into the frustrations of not being able to communicate.
-Just being able to further my knowledge of ASL.
-Several of us had wanted to do a signing workshop, but we never could have generated the enthusiasm and unity which Dr. Rittenhouse did.

5. WHAT SEMINAR CONTENT WAS MOST RELEVANT TO YOUR NEEDS?

- Learning to sign.
-The way the leader would go over the signs that were puzzling to a person. He would review which was very good.

6. WHAT SEMINAR CONTENT WOULD BE HELPFUL TO YOU IN A FOLLOW-UP?

-Follow-up on what problems we encountered with signs and Hope school population.
-Adaptation of signs.
--Method of teaching signs to Hope School Student
-- review for personal sign acquisition progress.
-More advanced sign and practical communication with people who depend on ASL for communication.
-More signs.

7. ADDITIONAL REMARKS.

-Excellent seminar - Hope School needs more seminars of this caliber.
-I was not particularly interested in learning sign language, but I am sorry it was necessary for it to be accelerated.
-Such workshops are extremely beneficial for our staff. We'd like more.

PRE-TEST/POST-TEST RESULTS FOR
ISU-HOPE SCHOOL SEMINAR
ON AMERICAN SIGN LANGUAGE

STUDENTS		ALPHABET	WORDS	NUMBERS	SENTENCES	TOTAL
1.	Pre	100%	73%	53%	67%	72%
	Post	100%	100%	93%	100%	98%
	Difference	0	+27%	+40%	+33%	+26%
2.	Pre	100%	47%	73%	50%	65%
	Post	100%	93%	93%	94%	95%
	Difference	0	+46%	+20%	+44%	+30%
3.	Pre	100%	27%	40%	44%	50%
	Post	100%	100%	73%	100%	93%
	Difference	0	+73%	+33%	56%	+43%
4.	Pre	92%	33%	60%	50%	57%
	Post	100%	93%	93%	25%	76%
	Difference	+ 8%	+60%	+33%	-25%	+19%
5.	Pre	92%	67%	67%	89%	78%
	Post	100%	100%	60%	100%	90%
	Difference	+ 8%	+33%	- 7%	+11%	+12%
6.	Pre	33%	7%	13%	6%	13%
	Post	83%	73%	20%	13%	45%
	Difference	+50%	+66%	+ 7%	+ 7%	+32%
7.	Pre	100%	60%	93%	50%	73%
	Post	100%	93%	53%	88%	83%
	Difference	0%	+33%	-40%	+38%	+10%
8.	Pre	100%	13%	53%	39%	48%
	Post	100%	100%	80%	81%	90%
	Difference	0%	+87%	+27%	+42%	+42%
9.	Pre	100%	87%	80%	94%	90%
	Post	100%	100%	93%	100%	98%
	Difference	0%	+13%	+ 7%	+ 6%	+8%
10.	Pre	75%	27%	47%	11%	37%
	Post	83%	93%	53%	44%	67%
	Difference	+8%	+66%	+6%	+33%	+30%
11.	Pre	100%	60%	60%	44%	63%
	Post	100%	93%	33%	75%	74%
	Difference	0%	+33%	-27%	+31%	+11%
12.	Pre	100%	20%	40%	67%	55%
	Post	100%	100%	87%	63%	86%
	Difference	0%	+80%	+47%	- 4%	+31%

STUDENTS		ALPHABET	WORDS	NUMBERS	SENTENCES	TOTAL
13.	Pre	100%	67%	27%	83%	68%
	Post	100%	100%	87%	81%	91%
	Difference	0%	+33%	+60%	- 2%	+23%
14.	Pre	100%	60%	53%	67%	68%
	Post	100%	100%	53%	94%	86%
	Difference	0%	+40%	0	+27%	18%
15.	Pre	100%	47%	53%	78%	68%
	Post	100%	93%	67%	75%	83%
	Difference	0%	+46%	+14%	-3%	+15%
TOTAL						
	Pre	87%	46%	54%	56%	59%
	Post	98%	96%	69%	75%	84%
	Difference	+11%	+50%	+15%	+19%	25%
Low/Pre		33%	7%	13%	6%	13%
High/Pre		100%	87%	93%	94%	90%
Low Post		83%	73%	20%	13%	45%
High Post		100%	100%	93%	100%	98%

REFERENCES

Brown, R. A first language, the early stages. Cambridge, Mass.: Harvard University Press, 1973.

Flavell, J. H. Cognitive development. Englewood Cliffs, N.J.: Prentice-Hall, Inc. 1977.

Friedman, L. Space, time and person reference in American Sign Language, Language, 51, 1975, 940-961.

Hunt, J. McV. Ordinal scales of infant psychological development: Six demonstration films. Visual Aids Service, University of Illinois, 1969.

Paget, R. & Gorman, P. A systematic sign language. National Institute for the Deaf, London, 1968.

Piaget, J. The child's conception of humber. New York: Humanities Press, 1952.

Piaget, J. Play, dreams & initiation in childhood. New York: Norton, 1951.

Piaget, J. The construction of reality in the child. New York: Basic Books, 1954

Piaget, J. Comments on Uygotsky's critical remarks concerning The language and thought of the child and Judgement and reasoning in the child. In L. S. Uygotsky, Thought and Language. Cambridge, Mass: M.I.T. Press, 1962.

Rittenhouse, R. K. English and sign in deaf children: Structure, acquisition and use. ERIC, Winter, 1979.

Wilbur, R. B. The linguistics of manual languages and manual systems. In L. L. Lloyd (ed.), Communication assessment and intervention strategies. Baltimore, MD.: University Park Press, 1976.